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Eradication of poverty and other development issues: industrial development cooperation

Industrial development cooperation

Note by the Secretary-General

The Secretary-General hereby transmits the report of the Director General of the United Nations Industrial Development Organization (UNIDO), submitted in accordance with General Assembly resolution 71/242.

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Report of the Director General of the United Nations Industrial Development Organization

I. Industrial development in review

A. Introduction

1. The previous two reports on industrial development cooperation (A/69/331 and A/71/264) highlighted the importance of inclusive and sustainable industrial development for poverty eradication, shared prosperity and the fight against climate change and other environmental damage. The statistical review contained in those reports presented clear evidence of the positive impact of manufacturing on poverty eradication, employment and inclusiveness.

2. Today, support for inclusive and sustainable industrial development as a driver of inclusive growth and sustainable development, as explicitly recognized in Goal 9 of the 2030 Agenda for Sustainable Development, is even stronger than it was two years ago.

3. The 2030 Agenda mainstreams the three dimensions of sustainable development and lays the foundation for a renewed global effort to promote structural transformation and industrialization. Section II of the previous report outlined the close interlinkages between inclusive and sustainable industrial development and the Sustainable Development Goals. The present report provides a summary of the interlinkages based on reporting by member States to the high-level political forum on sustainable development.

4. In addition, the Addis Ababa Action Agenda of the Third International Conference on Financing for Development underlines the critical importance of industrial development for developing countries, as a critical source of economic growth, economic diversification and value addition (General Assembly resolution 69/313, annex, para. 15). The landmark Paris Agreement on climate change also directly links industry with efforts to combat climate change and adapt to its negative effects. Also, at the regional level, several calls for action on industrialization have been made, including in the Agenda 2063: The Africa We Want of the African Union.

5. Since the submission of the previous report, the General Assembly underlined the need for the African continent to take urgent action on inclusive and sustainable industrialization in resolution 70/293 on the Third Industrial Development Decade for Africa (2016–2025).

6. In its resolution 69/235, the General Assembly recognizes the unique mandate and important contribution of the United Nations Industrial Development Organization (UNIDO) and encourages the Organization to continue linking its actions to support countries in realizing their industrial development aspirations with increased efforts to ensure inclusiveness as well as the environmental sustainability of industry. UNIDO continues to further refine its tools, programmes and structures to better support the implementation of the new universal framework for sustainable development.

B. Recent trends in industrial development

7. Since the beginning of the century, rapid growth in manufacturing has been a major source of poverty reduction in many countries through employment creation and income generation. Following a sharp drop in 2009 due to the global economic and financial crises, world manufacturing value added has recovered in both

industrialized and industrializing economies, with much of that growth emanating from developing countries.

8. Since the previous report in 2016, manufacturing growth has improved significantly in various regions. In 2017, world manufacturing value added reached an all-time high of $12,864 billion (at 2010 constant prices).

9. Even though the number of jobs created by manufacturing may have fallen in some countries and increased in others because of the geographical dislocation of manufacturing activities, overall employment in manufacturing worldwide has been rising.

10. Improved industrial performance in production, employment and technology has contributed significantly to the reduction of global poverty. The share of the world population living in absolute poverty has dropped below 10 per cent. In the past two years, the industrialized economies gradually emerged from the prolonged recession that followed the economic crisis in 2008–2009.

11. Also in the industrialized countries, a notable shift in the perception of the role of manufacturing in the economy has been observed, as they adopted new industrial policies focused primarily on promoting domestic production.

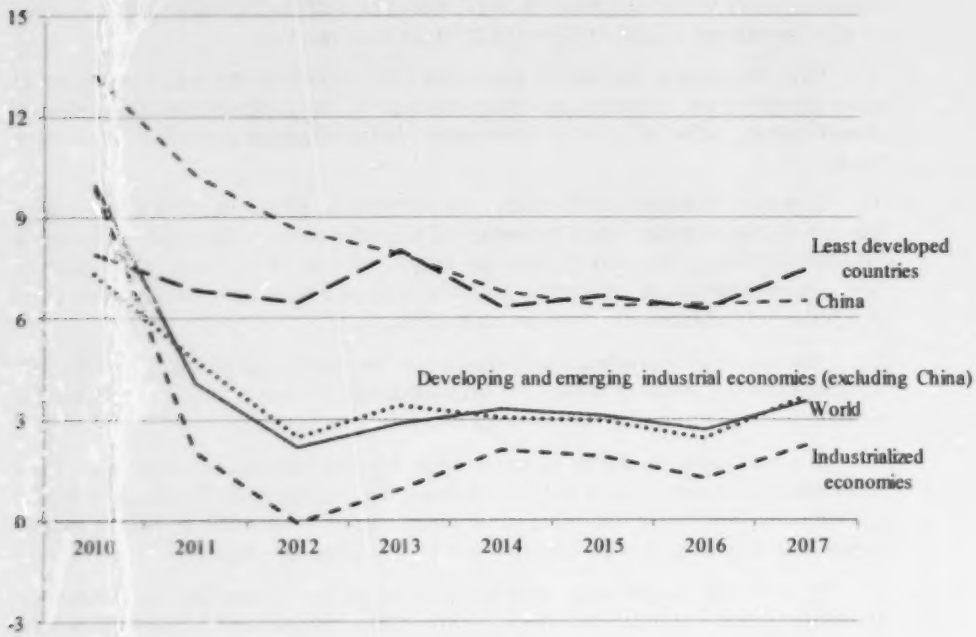
12. In recent years, the declining trend in global manufacturing observed in the early years after 2010 was reversed and a breakthrough was made in 2017 with much higher growth rates. World manufacturing value added rose by 3.5 per cent in 2017, a notable improvement from a growth rate of 2.7 per cent in 2016 (see figure I).

13. A recovery process was widely observed in the industrialized economies, especially in the European countries. A favourable business environment, including the financial sector, lower energy costs and the stabilization of commodity prices had a positive effect on global manufacturing.

14. Growth in manufacturing value added in 2017 was the highest recorded in the industrialized economies since 2011. Renewed manufacturing growth in the industrialized economies is likely to have a positive bearing at the global level, especially on the developing economies. It has been observed that the economic rise and downturn in industrialized countries has an impact on developing countries, transmitted through commodity exchange, foreign direct investment and remittances.

15. The manufacturing value added of the developing and emerging industrial economies rose by 3.7 per cent in 2017. China, which has emerged as the largest manufacturer in the world, has maintained relatively high growth in recent years. In 2017, growth in manufacturing value added in the least developed countries also improved. However, disaggregated data indicates that the least developed countries in Asia showed much higher growth rates than the least developed countries in sub-Saharan Africa.

Figure I
Annual growth of manufacturing value added, by country group, 2010–2017
(Percentage change in 2010 constant United States dollars)

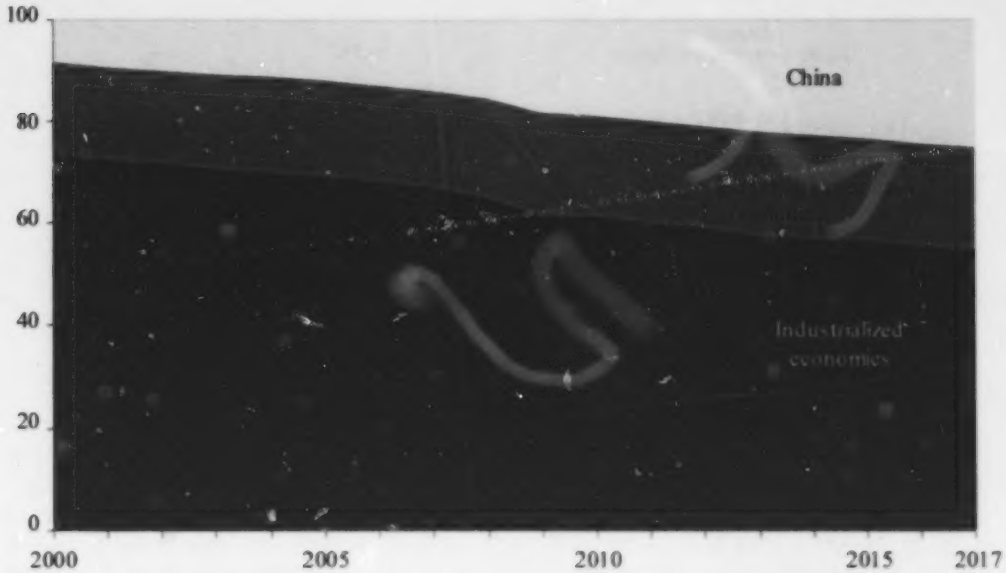


Source: UNIDO statistical database.

16. Owing to the higher growth performance of manufacturing value added, developing countries have significantly raised their share in global industrial production. At the beginning of 2018, industrialized countries accounted for almost three quarters of global industrial production. The share of developing countries (including China) increased from 26.4 per cent in 2000 to 44.9 per cent in 2017. China made the biggest contribution to this increase and accounts for almost one quarter of global manufacturing value added. As more countries industrialize, the current distinction between developing and industrialized economies will gradually disappear and the share of industrialized economies in global industrial production can be expected to rise consistently.

17. The main challenge to such prospects is posed, however, by the large number of countries that still have least developed country status. With almost 13 per cent of the world population, the least developed countries produce less than 1 per cent of global manufacturing value added. Moreover, the gap between the manufacturing value added per capita of the least developed countries and that of the industrialized economies has increased by almost 40 per cent since 1990, indicating a decline of relative productivity of the least developed countries vis-à-vis the industrialized economies. There is therefore a need for collective efforts by the international community to enhance the production capabilities of the least developed countries so as to bring them into the development mainstream.

Figure II
Distribution of world manufacturing value added, by country group, 2000–2017
(Percentage)



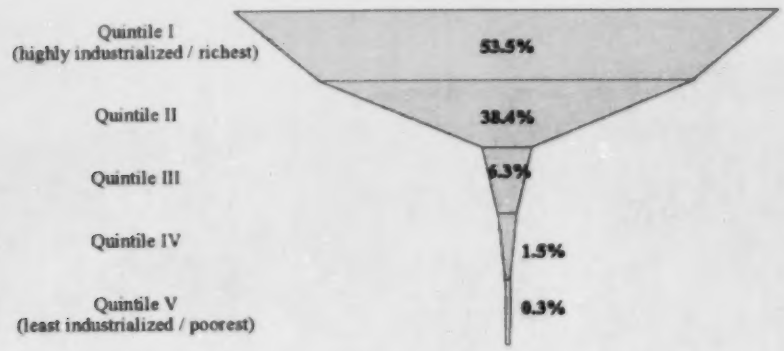
Source: UNIDO statistical database.

18. One of the biggest challenges of the global industrialization process is the uneven distribution of manufacturing output among the nations. Emerging industrial economies together with industrialized economies account for a very large portion (more than 90 per cent) of global manufacturing value added. This portrays a fragile picture (see figure III) of world manufacturing. Concentration of most resources in a few countries raises the dependence and vulnerability of the global economy and threatens sustainable industrialization. The collapse of even a few large firms may have a catastrophic impact on the economy far beyond national borders.

19. In order to expand the base of the global economy and to limit the potential impact of such an economic shock on the market at large, in the present context of a globalized world, it is essential that the capacity of production of goods and services in low-income countries is expanded and that their dependence on external factors, such as investment in capital goods and exports, is gradually reduced.

20. Effective policy interventions and financial support from development partners are required to reduce the inequality among nations. An important measure in this regard is the implementation of target 9.3 of the Sustainable Development Goals, which calls for increasing the access of small-scale industries to financial services and their integration into global value chains and markets.

Figure III
Inequality of manufacturing value added among nations, 2017
(Share in global manufacturing value added (percentage), per quintile)



Source: UNIDO statistical database.

21. As countries advance and reach a post-industrial level of development, they diversify their economic activities in order to satisfy the increasing needs of high-income households in services, resulting in a gradual decline in the share of manufacturing in gross domestic product (GDP). Statistics indicate, however, that in recent years the share of manufacturing in GDP is falling in the least developed countries in Africa, indicating premature deindustrialization.

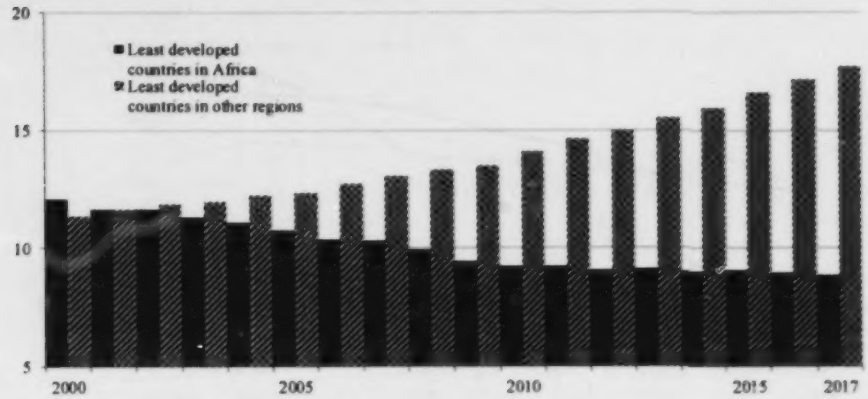
22. In the least developed countries in Africa, the share of manufacturing in GDP has dropped below 10 per cent since 2007. During the same period, the contribution of manufacturing to the economies in the least developed countries in other regions, especially in Asia, has increased significantly.

23. Target 9.2 of the Sustainable Development Goals aims to double the share of industry in GDP in the least developed countries. The observed trends in the least developed countries in Africa are thus an alert to the international community and raise concerns that this target may not be achievable unless a multifaceted campaign, including a targeted investment programme in industrialization, is launched.

24. On the other hand, weak industrialization is one reason why sub-Saharan countries have a low capacity to absorb surplus labour. High rates of unemployment have triggered mass emigration and the radicalization of young people, causing serious social problems that threaten peace and political stability in the region. Figure IV shows the diverging trends of industrialization in the least developed countries in Africa and elsewhere.

Figure IV
Share of manufacturing value added in GDP in the least developed countries, 2000–2017

(Percentage at constant 2010 United States dollars)



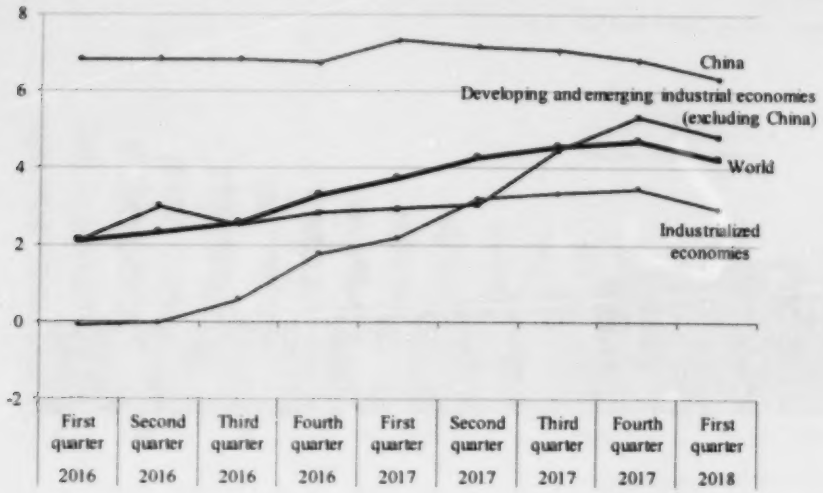
Source: UNIDO statistical database.

25. While manufacturing growth reached its highest level in 2017, world exports of merchandise trade have decreased in recent years. Manufacturing products account for almost three quarters of merchandise exports globally. Exports of manufactured goods dropped in 2016 and 2017 compared with previous years in major country groups, as well as in China.

26. The decline in trade is caused by falling commodity prices, including fuel prices. Recent developments concerning transatlantic tariffs are expected to further adversely affect the commodity exchange among industrialized economies.

27. At a time when the world has just recovered from a prolonged recession, any drastic change in established trade arrangements is likely to have a negative impact on global manufacturing. The first concerning signs are already showing in the deceleration of manufacturing output growth in the first quarter of 2018, which was lower than in the last quarter of 2017 in industrialized economies, China and developing and emerging industrial economies (see figure V). In view of this development, countries might need to adopt an efficient policy mechanism to sustain growth from the impending risk of another downturn.

Figure V
Quarterly growth of manufacturing output by country group, 2016–2018
(As a percentage compared with the same period of the preceding year)



Source: UNIDO statistical database.

C. Conclusions on recent trends in industrial development

28. The positive relationship between manufacturing (as measured by manufacturing value added) and economic performance (GDP) in developing countries continues to underscore the importance of industrial transformation as the main engine of economic growth.

29. In addition to its contribution to production, exports, income, employment and poverty reduction, manufacturing contributes significantly to innovation and technological upgrading.

30. Owing to the continuous rise of productivity and competitiveness, new and sophisticated manufactured products have become accessible to a large number of households not only in industrialized but also in developing countries.

31. Manufacturing has changed the way that people communicate, receive basic information and entertain. Household appliances, such as washing machines, dishwashers and vacuum cleaners, have significantly eased the burden of household work, allowing more time to be spent on productive activities outside the home.

32. Manufacturing has contributed to deep structural changes. The average growth of high-tech products in recent years is higher than in other sectors, indicating a gradual shift of manufacturing activities to high-tech products.

33. In summary, global manufacturing is on the rise: it is creating more wealth and opportunities, generating employment and thereby preventing households from falling into poverty. However, its growth path has varied for different economies and therefore requires the utmost attention of policymakers and international development partners.

34. The Sustainable Development Goals, particularly Goal 9, offer the relevant global agenda for industrialization. Financing industrial development has been one of the main challenges in the aftermath of the recent recession, which entailed a significant decrease in foreign direct investment in developing countries. Such a global challenge requires a global response.

II. Industrial development and the 2030 Agenda for Sustainable Development

A. Inclusive and sustainable industrial development and the Sustainable Development Goals

35. Since the adoption of the 2030 Agenda, UNIDO member States have reported on an annual basis through the President of the Industrial Development Board to the high-level political forum on sustainable development on the contribution of UNIDO to the fulfilment of the 2030 Agenda and the industry-related Sustainable Development Goals and targets.

36. The high-level political forum on sustainable development in 2017 was particularly important for UNIDO as it featured the first in-depth review of the implementation of the Sustainable Development Goals under the theme "Eradicating poverty and promoting prosperity in a changing world" and included a review of Goal 9. In response to the invitation of the President of the Economic and Social Council, the President of the Industrial Development Board submitted a substantive input document in April 2017.[1]

37. For the high-level political forum on sustainable development in 2018, member States prepared an input document entitled "Transformation towards sustainable and resilient societies: using synergies of sustainable energy systems and inclusive, sustainable industrial development that leaves no one behind", focusing on the contribution of inclusive and sustainable industrialization to the achievement of Goal 7.[2]

38. The submission highlighted that rapid industrialization has lifted hundreds of millions of people out of poverty in the past decades by providing them with jobs and income, but that progress has been uneven, with many remaining stuck in a poverty trap, particularly in areas where industrialization levels have remained low or have stagnated. This shows how inclusive and sustainable industrial development is key to poverty reduction efforts and ensuring that no one is left behind by 2030.

39. The achievement of inclusive and sustainable industrialization (Goal 9) enables sustained economic growth and the creation of decent jobs (Goal 8). It helps to reduce poverty (Goal 1), hunger (Goal 2) and inequalities (Goals 5 and 10), while improving health and well-being (Goal 3), increasing resource and energy efficiency (Goals 6, 7, 11 and 12) and reducing greenhouse gas and other polluting emissions, including from chemicals (Goals 13, 14 and 15).

40. UNIDO, as the only entity of the United Nations mandated to promote inclusive and sustainable industrial development, has extensive knowledge and technical experience in these areas. The Organization realizes its mandate by designing and implementing industrial policies, enhancing local productive capacities and entrepreneurship, contributing to job creation, advancing economic competitiveness and enabling market access, advancing the diffusion of environmentally sound technologies and practices in production systems and partnering with the private and public sectors to mobilize investments in an inclusive, sustainable and resilient manner.

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[1] See https://sustainabledevelopment.un.org/content/documents/14570Industrial_Development_Board_of_UNIDO.pdf.

[2] See https://sustainabledevelopment.un.org/content/documents/18173IDB_input_to_HLPF_2018.pdf.

41. In the submission to the high-level political forum, the member States call for partnerships of host country governments, international donors, United Nations agencies, financial institutions and the private sector to mobilize private and public investments (including official development assistance) around a long-term inclusive and sustainable industrialization plan to build export-oriented and job-creating industrial capacity. They recommend designing and implementing industrial policies that promote employment, reduce poverty and comply with local and international standards (for example, related to product quality, labour and the environment) to facilitate integration into global value chains and to make industrialization inclusive and sustainable. They call for technical cooperation services for capacity-building and vocational and other training, especially for women and young people and, where possible, in partnership with the private sector. Public and private sector, domestic and foreign investments in research and development, innovation, education, training and infrastructure should be increased to improve competitiveness. Industrialization that encourages employment instead of displacement should be promoted.

42. With the proper policy framework and international cooperation in place, the benefits of economic development and technological progress, including the new industrial revolution, can be shared more widely.

B. Harnessing the potential of the new industrial revolution for sustainable development

43. The new industrial revolution, also known as the next production revolution, the fourth industrial revolution, or Industry 4.0, refers to the growing application of digital technologies at any stage of industrial production, from conceptualization to product design, manufacturing, distribution and recycling.

44. Emerging technologies that are associated with this paradigm include robotics, big data, augmented reality, additive manufacturing (3D printing), cloud computing, the Internet of things, networked sensors and actuators, and artificial intelligence.

45. The interconnection and integration of the digital and real worlds, even across great distances, is likely to transform industries. And while the consequences of the new industrial revolution remain uncertain today, it is expected that it will change how manufacturers, economic sectors and even countries integrate within global value chains in the near future.

46. The technologies of the new industrial revolution have the potential to improve the flexibility and efficiency of production processes, optimize decision-making and enable greater product customization.

47. Significant productivity gains are likely to result from improved process flexibility, adaptability and efficiency. New technologies are poised to increase the ability of industrial firms to manage, process and analyse enormous amounts of data in real time, leading to the emergence of customizable "smart" production systems.

48. The new industrial revolution also has the potential to increase energy and resource efficiency and further the transition to a circular economy. Taken together, these developments are likely to lead to the emergence of more sustainable production and consumption patterns.

49. The area in which the most significant concerns about digitization are raised is employment. In recent years, a strand of studies has argued that technological change — and particularly greater automation — is likely have a profound and negative impact on employment in developing and emerging economies.

50. The literature, however, has not reached a consensus on the likely impact of Industry 4.0 on the future of work, as many of the studies that see a negative impact on employment take technical feasibility, rather than economic rationality, as the primary criterion driving the substitution of labour. Yet other studies suggest that several indirect mechanisms can compensate for the negative direct employment effects of new technologies.

51. Increased automation is also not expected to affect all sectors equally. While sectors such as electronics and machinery are increasingly being automated, other more traditional and skilled labour-intensive activities, such as the manufacturing of garments and shoes, have seen minimal automation so far. That is because automation makes more economic sense in some sectors than in others.

52. Different risks also exist with regard to the nature of employment. With routine, low-skill functions being arguably more susceptible to automation, the demand for skills may be expected to shift towards more knowledge-intensive occupations. As a result, educational requirements may change, with new technologies generating greater demand for workers with higher levels of skills and education.

53. Given these varied considerations, the net impact of new technologies on employment remains a matter for empirical investigation. Moreover, as noted above, the adoption of automation in developing economies remains extremely limited.

54. The impact of the new industrial revolution on international trade and production remains even more a matter of speculation. Some observers have suggested that a reshoring or repatriation may take place, namely that multinational corporations may increasingly relocate production activities closer to their home market owing to the availability of new, relatively inexpensive technologies — such as robotics and 3D printing — supported by superior infrastructure, eventually eroding the competitive advantage of lower-wage countries. A recent study by the Organization for Economic Cooperation and Development (OECD) on reshoring, however, finds little evidence that relocation is a widespread phenomenon.[3]

55. On the contrary, recent research finds that there are significant potential benefits for smaller companies in developing countries, especially in the light of better connectivity and the spread of e-commerce, as well as innovative channels to access finance, labour, inputs and production services, customer service, sales channels and marketing.

56. Furthermore, the increasing domestic demand in emerging industrial countries, as a result of the growth of a middle class, suggests that these are important customer bases, not unlike industrialized countries. Provided that infrastructure is put in place, production may therefore continue clustering in developing countries, rather than relocating to industrialized economies.

57. At present, the trends of the new industrial revolution are more likely to become a reality in the industrialized countries that are close to the technological frontier, such as Germany, Japan, the Republic of Korea and the United States of America, but are also being seen in emerging industrial countries such as China.

58. At the same time, however, a growing number of players, including emerging economies, are adopting advanced manufacturing processes, even in areas traditionally reserved for highly industrialized countries. One example is the

[3] De Backer, K. and others, "Reshoring: myth or reality?", OECD Science, Technology and Industry Policy Papers, No. 27 (Paris, Organization for Economic Cooperation and Development, 2016).

aerospace sector, in which several middle-income countries have endeavoured to gain a presence in specific segments of the global market.

59. As efforts are made to understand the opportunities and threats that the frontier technologies present, the real extent of the possible consequences of the new industrial revolution remains to be seen. It possesses transformative yet disruptive potential and raises serious ethical concerns. In the absence of adequate normative and regulatory frameworks, and given the need to ensure that the social benefits are shared and destabilizing risks are minimized, the United Nations and its specialized agencies have a special role and responsibility.

60. It is important for the United Nations system and its specialized agencies to continue working closely on the matter, identifying and prioritizing technologies; strengthening capacities; enhancing decision-making tools and information; assessing the feasibility of technology; supporting environments that enable local governments to incorporate adaptation to new technologies; and increasing access to financing.

61. The United Nations system and its specialized agencies need to ensure that the opportunities are taken to benefit the realization of the 2030 Agenda and that inequalities are not exacerbated. Countries with low technological capabilities, in particular the least developed countries, risk being marginalized and need support, particularly regarding suitable industrial policy frameworks.

62. Given the important role of the industrial sector in the development, application and dissemination of new technologies, UNIDO, as the central coordinator of industrial development in the United Nations system, bears a special responsibility for supporting Member States in that regard.

C. Repositioning of the United Nations development system

63. In its resolution 71/243 on the quadrennial comprehensive policy review of operational activities for development of the United Nations system, adopted in December 2016, the General Assembly launched the ambitious but necessary plan for the reform of the United Nations to deliver effective support to countries for sustainable, equitable and accountable development under national ownership and leadership. It aimed at providing guidance for the United Nations development system in full alignment with the 2030 Agenda for Sustainable Development, which was adopted in 2015.

64. Two years on, the reform encompasses three tracks for the United Nations to deliver better through: (a) development system reform; (b) management reform; and (c) reform of the peace and security pillar. UNIDO has actively participated in various activities related to these reforms.

65. In June 2017, the findings of the mapping exercise to produce a system-wide outline of functions and capacities of the United Nations development system (known as the "Dahlberg Report") and the launch of the report of the Secretary-General entitled "Repositioning the United Nations development system to deliver on the 2030 Agenda: our promise for dignity, prosperity and peace on a healthy planet" (A/72/684-E/2018/7) revealed that the development system had yet to transition to the 2030 Agenda and the Sustainable Development Goals.

66. The report identified significant gaps in the thematic coverage of Sustainable Development Goals, which were particularly evident in the "new" Goals relating to economic and environmental dimensions of sustainable development. It found that Goal 9 (industry, innovation and infrastructure), as well as the Goals relating to water,

energy and the environment (Goals 6, 7, 12, 13, 14 and 15) were underfunded and underimplemented.

67. This finding draws attention to the need for the development system to ensure that the three core elements of sustainable development — the economic, social and environmental dimensions — are balanced. As the present report and previous reports on industrial development cooperation demonstrate, structural transformation and the economic dimension are essential for development transformation, particularly for the least developing countries and economies in transition.

68. At the end of 2017, the Secretary-General, in his report entitled "Repositioning the United Nations development system to deliver on the 2030 Agenda: our promise for dignity, prosperity and peace on a healthy planet" (A/72/684-E/2018/7), highlighted seven transformations with the aim of ensuring delivery on the goals contained in the 2030 Agenda and the pledge to leave no one behind for the people that the United Nations serves:

(a) A system-wide strategic document as a strategic tool to guide and accelerate alignment with the 2030 Agenda, focused on concrete actions;

(b) A new generation of United Nations country teams that are demand-driven and tailored to meet the specific development priorities and needs of countries;

(c) An impartial, independent and empowered resident coordinator system, establishing a development-focused United Nations country-level team with stronger capacity, accountability and impartiality;

(d) A coordinated, reprofiled and restructured regional approach for better cohesion and coordination at the regional level;

(e) The strengthening of horizontal governance and system-wide transparency and evaluation;

(f) The strengthening of United Nations partnerships and South-South cooperation;

(g) A funding compact aimed at setting out mutual commitments to foster investments in the United Nations system towards stronger funding mechanisms for the 2030 Agenda.

69. The reform of the United Nations development system provides an opportunity for the system to "get it right", as it progresses towards a reinvigorated resident coordinator system within the new generation of country teams. The elements of impartiality and independence play an important role, as they should enable the outreach and representation of the entire family of the United Nations development system, including its specialized agencies, regardless of their size or local presence in the field (that is, including non-resident agencies).

70. Another area in which UNIDO sees opportunities for the development system to progress innovatively is the new industrial revolution that is gaining momentum and transforming economies, countries and societies around the globe. As subsection B above shows, the fourth industrial revolution is bringing connectivity and a higher level of automation to manufacturing and other areas, including health, skills and education.

71. The United Nations must take advantage of such emerging opportunities to ensure that Member States, in particular developing countries, are not left behind with respect to innovation and progress. UNIDO is of the view that the appropriate strategies and approaches can create opportunities for developing countries to rapidly catch up. While there is no unique path to development and no "one size fits all" solution, the Organization may use appropriate analysis tools to help identify patterns

of industrialization that inform industrial policies to absorb innovation and support green growth for inclusive and sustainable industrial development.

72. While it is necessary for UNIDO to prioritize its interventions, given its size, capacity and funding situation, there are new and welcome opportunities for the United Nations development system to work in a more coordinated manner. This should lead to stronger cooperation among the different United Nations entities. It is clear that the call for more predictable funding for the United Nations system must be accompanied by higher value added for Member States.

III. Response of the United Nations Industrial Development Organization

A. Introduction

73. Based on the Lima Declaration (see GC.15/INF/4, resolution GC.15/Res.1), in which the General Conference reaffirmed the unique role of the Organization as the central coordinator of international cooperation towards inclusive and sustainable industrial development in the United Nations system, UNIDO is well positioned to fulfil its mandate of supporting member States in their efforts to achieve the industry-related Sustainable Development Goals.

74. This vision for UNIDO is amplified by the global mandate of the 2030 Agenda, which recognizes inclusive and sustainable industrial development as a major driver of sustainable development, for example, in Goal 9. The renewed momentum of industrial development cooperation comes at a time of persisting poverty, humanitarian crises, a volatile global economic environment, growing inequalities, a changing climate, environmental degradation and the advent of a new technological revolution.

75. While the success of the 2030 Agenda depends on the actions of each individual Member State, there is an indisputable role for the United Nations, and a need for specialized agencies such as UNIDO to support them in their efforts. Neither governments nor the private sector can solve the wide-ranging challenges of today alone. UNIDO acts as the platform for industrial development cooperation and helps to expand and diversify manufacturing value added, enhance domestic entrepreneurial and technological capabilities and competitiveness, and improve equality and access to decent jobs, while reducing the environmental impact.

76. The strategic priorities and programmatic objectives of the Organization are defined in the medium-term programme framework. With the recent adoption of the framework for the period 2018–2021, the planning cycle of UNIDO has been aligned with the cycle of the quadrennial comprehensive policy review (see IDB.45/8/Add.2-PBC.33/8). The new framework also highlights more clearly the theory of change that links the results of UNIDO with the Sustainable Development Goals. The objective for the next four years is to scale up the results of UNIDO interventions and to better integrate the four core functions: technical cooperation; analytical and research functions and policy advice; normative functions, including standards and quality-related activities; and convening and partnerships for knowledge and technology transfer, networking and industrial cooperation.

77. The strategic focus of UNIDO continues to include the three existing priorities: creating shared prosperity; advancing economic competitiveness; and safeguarding the environment. With the introduction of a fourth strategic priority on strengthening knowledge and institutions, a critical outcome and enabler of higher-level results is being elevated to the strategic priority level.

78. The Organization aligns itself with all relevant United Nations system-wide initiatives and coordination mechanisms at the global, regional and national levels, including all those emanating from General Assembly resolutions on the quadrennial comprehensive policy review, most recently resolution 72/279.

79. Working partnerships are established with most organizations of the United Nations system, including the Food and Agriculture Organization of the United Nations, the International Fund for Agricultural Development, the International Labour Organization, the International Telecommunication Union, the International Trade Centre, the United Nations Conference on Trade and Development, the United Nations Development Programme, the United Nations Environment Programme, the United Nations Educational, Scientific and Cultural Organization, the United Nations Human Settlements Programme, the United Nations Entity for Gender Equality and the Empowerment of Women (UN-Women), the World Health Organization, the World Tourism Organization, the World Intellectual Property Organization, the World Trade Organization and the institutions of the World Bank Group.

80. Moreover, UNIDO broadened its engagement with international and regional development banks, regional economic and political organizations, and a wide range of private sector partners. Following UNIDO engagement with the Group of 20 (G20) in 2016, notably through the report entitled "Industrialization in Africa and least developed countries: boosting growth, creating jobs, promoting inclusiveness and sustainability", prepared for the G20 Development Working Group, UNIDO continued to contribute to G20 deliberations on Africa and industrialization in 2017. In the context of its cooperation with OECD, UNIDO contributed analysis on the role of Industry 4.0 to a report by OECD for the G20 that examines the opportunities and challenges of the next production revolution. UNIDO also continued to strengthen its cooperation with Brazil, the Russian Federation, India, China and South Africa (the BRICS group), so as to promote industrial development cooperation in those five major emerging economies.

81. Given its long-standing mandate to maintain worldwide industrial statistics and its unique role within the international statistics system, in 2016 the United Nations Statistical Commission appointed UNIDO as a custodian agency for six industry-related indicators under Goal 9. In that role, UNIDO provides data for the global database of Sustainable Development Goal indicators and contributed to *The Sustainable Development Goals Report 2017*. In addition to its participation in the Inter-agency and Expert Group on Sustainable Development Goal Indicators, UNIDO maintains direct contact with national statistical offices and international agencies concerning the implementation of Sustainable Development Goal indicators. To address limited data availability, UNIDO intends to support further enhanced collection, processing and dissemination of data related to small industrial enterprises in developing countries.

82. The sections below provide a selective but balanced overview of the contribution of UNIDO to the fulfilment of the 2030 Agenda.

B. Creating shared prosperity

83. Despite notable progress in some countries, poverty remains the greatest global challenge. Gains of economic progress have not been evenly spread. The majority of the world's poor continue to live in rural areas, lacking basic infrastructure and gainful employment, with women and young people often disproportionately affected. A lack of socioeconomic development also reduces resilience to external shocks and to natural crises and conflicts.

84. UNIDO employs its long-standing expertise in improving agro-industrial value chains, focusing on adding value to agricultural production by strengthening the linkages between agriculture, industry and markets, including the upgrading of food processing technologies and skills, the promotion of food safety and the reduction of post-harvest losses. UNIDO supports light manufacturing to help raise both productivity and incomes, in particular through support for small and medium-sized enterprises and by increasing the participation of women and young people in productive and entrepreneurial activities. Through these interventions, complemented by its post-crisis and human security programmes, UNIDO is fostering inclusive and sustainable growth, allowing the benefits of prosperity to be shared more equally and supporting progress towards achieving Goal 1 and related goals.

85. The integration of women into higher-skilled and better-paying productive activities remains a priority in many UNIDO interventions. Through a broad range of job creation and entrepreneurship initiatives, UNIDO helps to give women and young people the tools to grasp economic opportunities. The Entrepreneurship Curriculum Programme, for example, lays the groundwork for the development of a sustainable dynamic private sector in over a dozen of countries where over 2 million young women and men have studied entrepreneurship based on the UNIDO-supported curriculum.

86. To support developing countries, in particular the least developed countries, UNIDO continues to facilitate the strengthening of agro-industrial capacities and technological upgrading along agro-industrial value chains, from the farm level to final consumption. In collaboration with the Food and Agriculture Organization of the United Nations, as part of the African Agribusiness and Agro-Industries Development Initiative, UNIDO is continuing to focus in particular on African countries in value chain development, the promotion of agribusiness investment and agro-enterprise development.

87. UNIDO has been providing direct assistance to many developing countries to support the establishment of industrial estates, and has published over a hundred studies, guidelines and specifications in that regard. In the past few years, UNIDO has helped a number of countries to set up sustainable agribusiness value chains and integrated agro-industrial parks covering food and food systems, leather and footwear, textile and garments, wood and woodworking, agro-mechanization and creative industries.

88. The Organization's post-crisis assistance is focused on activities that foster economic recovery, rehabilitate damaged agricultural or industrial infrastructure, restore the productivity of small and medium-sized enterprises, raise skills for greater employability and create employment opportunities, thus contributing to the stabilization of communities.

C. Advancing economic competitiveness

89. Unemployment, young people living from subsistence agriculture, the informal economy, rising inequalities, urbanization and rapid technological change reaching all disciplines are among the greatest challenges facing the world today.

90. UNIDO attempts to meet those challenges by supporting the creation of a business environment that promotes the development of markets and product quality; encourages competition and the development of small and medium-sized enterprises; reduces transaction costs and risks; addresses the informal economy and social exclusion; provides modern business infrastructure, utilities and business support services for skill upgrading and entrepreneurship; attracts impact investment; and stimulates innovation, technological learning and upgrading of firms.

91. Through tailor-made programmes promoting the establishment of a favourable business environment, trade capacity-building for global value chain integration, impact investment, innovation system approaches, the development of small and medium-sized enterprises and clusters, entrepreneurship and industrial upgrading, UNIDO assists developing countries in creating decent jobs, attracting investment and adopting new innovative technologies.

92. UNIDO emphasizes stakeholder engagement at all stages: policy formulation, investment and technology promotion, providing advice on the strengthening of sustainable business and good-quality infrastructure, providing conformity assessment services, supporting the private sector in achieving compliance with various international standards and investing with a social, environmental and economic impact. The UNIDO network of Investment and Technology Promotion Offices provides value added services to entrepreneurs and institutions seeking international industrial alliances and acts as a platform for public and private stakeholders to establish collaborative links between developed and developing countries.

93. UNIDO also provides programmes and tools for capacity-building of governments and institutions on setting up strategic policy and regulatory frameworks that nurture entrepreneurship, the formal economy, the development of small and medium-sized enterprises and clusters, and quality compliance. During the reporting period, UNIDO issued several policy guidance publications, including the 2017 edition of the Trade Capacity-Building Resource Guide, strategic frameworks for leveraging a new generation of industrial parks and zones for inclusive and sustainable development and a methodological guide on industrial upgrading.

94. UNIDO programmes and tools are also used for promoting sectoral and firm-level industrial upgrading, such as in the automotive, textile and apparel, agro-food processing, leather, cement and pharmaceutical sectors. In addition to the partnership with the African Union to accelerate the implementation of the Pharmaceutical Manufacturing Plan for Africa, UNIDO embarked on a regional initiative in collaboration with the West African Health Organization to develop the pharmaceutical manufacturing industry in the Economic Community of West African States.

D. Safeguarding the environment

95. The need to decouple economic growth from environmental degradation is unquestionable as the effects of accelerating climate change and resource depletion continue to alter habitats, threatening livelihoods and ecological sustainability.

96. UNIDO is at the forefront of efforts to build a sustainable system that allows growth while protecting the natural environment and human health. UNIDO assists governments, institutions, and industry to best adapt their production methods, move towards cleaner production systems and develop sustainable, efficient energy solutions. The programmes focus on promoting clean and renewable energies; smart cities and low-carbon transport; fostering energy and resource efficiency and cleaner production; advancing a circular economy; and developing resource stewardship programmes. With expertise built up over decades, the Organization also plays a pivotal role in helping governments meet the requirements of international agreements to phase out ozone-depleting substances and toxic chemicals such as persistent organic pollutants.

97. UNIDO technical cooperation supports the circular economy model by providing solutions to decouple production value chains from the depletion of natural resources and the degradation of the environment. The circular economy approach

increases the resource efficiency of manufacturing processes; facilitates the development, adoption and maintenance of environmentally friendly products; extends the useful lifespan of products; introduces new business models based on reuse, repair and remanufacturing; and enables the sustainable management of waste by industries. Establishing eco-industrial parks and converting existing industrial zones into eco-industrial parks are illustrative of the Organization's approach to promoting a circular economy.

98. The programme on resource efficient and cleaner production has long been an important element in the work of UNIDO on the environment. This flagship initiative builds capacity and supports know-how transfer to cleaner production centres in 51 countries in order to improve resource productivity and environmental performance. Efficiency increases for processes, products and services improve resource productivity and reduce risks to communities and the environment. In conjunction with the programme, the Global Network for Resource Efficient and Cleaner Production acts as a platform to spread and scale up policies and practices on resource efficient and cleaner production.

99. UNIDO also developed a comprehensive approach for the sound and innovative management of chemicals in industry. A core element of the approach is chemical leasing: a circular business model pioneered by UNIDO in developing and transitional economies. It aims at maximizing the utility derived from expensive and hazardous substances in industry while minimizing their cost and environmental impact.

100. The activities of UNIDO under the Montreal Protocol on Substances that Deplete the Ozone Layer have contributed to the phase-out of over a third of ozone-depleting substances from the developing world. UNIDO is assisting industry around the world with the phase-out of hydrochlorofluorocarbons (HCFCs) and following the Kigali Amendment in October 2016, has also started enabling activities for the phase-down of hydrofluorocarbons (HFCs). In addition to eliminating ozone-depleting substances, the Organization seeks and promotes technology options that minimize climate impact. Using 1990 as a baseline, this has avoided the use and potential emission of over 240 million tons of carbon dioxide-equivalent per year. A large share of these emissions stem from refrigeration and air conditioning systems running with HCFCs and HFCs. Increasingly, UNIDO is also working on green design, better servicing of equipment and improving the energy efficiency of such systems as they are the largest consumers of electric energy.

101. UNIDO is also an important implementing agency of the Stockholm Convention on Persistent Organic Pollutants, helping signatories to the Convention to create national implementation plans to comply with treaty obligations to limit or eliminate persistent organic pollutants, which are highly toxic to humans and wildlife and remain in the environment for long periods. Specifically, UNIDO works to optimize production processes, particularly those related to recycled raw materials, establish new facilities and to set up recycling and waste management programmes.

102. UNIDO also plays an active role in assisting countries in the implementation of the Minamata Convention on Mercury, a new multilateral environmental agreement that came into force in August 2017. The UNIDO mercury programme has traditionally focused on artisanal and small-scale gold mining. However, over the past five years, UNIDO has showcased its comparative advantage outside this sector by working in areas such reducing mercury use and emissions in several industrial sectors, such as in the production of certain plastics. Efforts in the cement industry have allowed multi-focal approaches to be applied simultaneously in waste incineration and the reduction of emissions of carbon dioxide, mercury and persistent organic pollutants.

103. UNIDO is facilitating the sustainability of the water supply to industries, particularly in water-scarce areas. Sustained water supply is a key requirement for the establishment of almost all industries, but one that is becoming increasingly difficult to fulfil as a result of climate change. Multi-stakeholder approaches combine water savings and better water retention.

104. The concept of a circular economy has become central to the work of UNIDO to safeguard the environment. In addition to introducing the circular economy and its elements through projects, UNIDO is also present in key international forums, undertakes frequent exchanges with the most important stakeholders and provides briefings to member States on the circular economy, in a consultative exchange on this concept and its best practices.

105. The UNIDO renewable energy programme promotes the establishment of mini-grids based on viable and proven technologies, such as small hydropower, biomass and solar energy for local economic development and productive activities in rural areas. The programme further aims to foster domestic value creation within the field of clean energies.

106. The UNIDO industrial energy efficiency programme focuses on policy and standards, building capacity, raising awareness and demonstrating new technologies. It also encourages the implementation of energy management systems based on the energy management standard ISO 50001 and energy system optimization. The UNIDO low-carbon, low-emission clean energy technologies programme provides a comprehensive technology transfer and localization mechanism.

107. The UNIDO flagship programme on clean technology and innovation seeks to accelerate the uptake of innovative climate and clean energy technologies. This is achieved by identifying and fostering small and medium-sized enterprises and start-ups with clean technology innovations to refine and enhance their products and business plans and linking them to potential financing and investment channels to scale up their impact.

108. UNIDO and the United Nations Environment Programme jointly host the Climate Technology Centre and Network, which was set up in 2013 as the operational arm of the Technology Mechanism of the United Nations Framework Convention on Climate Change. The Network supports developing countries in adopting clean technologies for pursuing energy-efficient, low-carbon and climate-resilient development. It provides technology solutions, capacity-building and advice on policy, legal and regulatory frameworks tailored to the needs of individual countries.

109. UNIDO provides technical support for the establishment and operation of the Global Network of Regional Sustainable Energy Centres, an innovative South-South and triangular multi-stakeholder partnership to accelerate the energy and climate transformation in developing countries. UNIDO is the co-organizer of the Vienna Energy Forum, one of the largest and most significant sustainable energy events in the world, which had also contributed to the formulation of the targets for Goal 7. Following a successful forum in 2017, UNIDO organized a special session in May 2018 as a contribution to the forthcoming review of Goal 7 by the high-level political forum on sustainable development in 2018.

E. Strengthening knowledge and institutions

110. As mentioned in paragraph 76 above, the UNIDO medium-term programme framework for the period 2018–2021 includes a new strategic priority on strengthening knowledge and institutions, in addition to the three existing thematic

priorities that represent the dimensions of sustainable development (economic, social and environmental) as applied to the UNIDO mandate.

111. The new priority captures activities that, to some degree, are already being undertaken by the Organization, either under other strategic priorities, in identified cross-cutting areas, or through its analytical and statistical work. However, by elevating these activities to a higher priority level, UNIDO emphasizes its plan to increase its focus on these activities and the associated development results, to better support countries in their efforts towards achieving inclusive and sustainable industrial development and the Sustainable Development Goals.

112. In addition, the aim of strengthening knowledge and institutions also prioritizes a wide range of knowledge and institutional support activities that do not fall specifically within the three strategic priorities, but are necessary and instrumental to the advancement of inclusive and sustainable industrial development. These activities range from technical cooperation projects to regional programmes, research activities, analytical work and inter-agency or multi-stakeholder coordination undertakings.

113. These activities will include the efforts undertaken by UNIDO in its role as the custodian agency of the targets of Goal 9; input into the Sustainable Development Goal follow-up and review mechanisms; the increased institutional support to member States required as they take greater ownership of their sustainable development strategies; and the analytical work required to address the complexity of the Sustainable Development Goal framework and the associated trade-offs and synergies for development cooperation activities, policies and investments.

114. More specifically, strengthening knowledge and institutions means, among other things:

(a) Advancing the technical, policy and normative knowledge base for inclusive and sustainable industrial development, including by extracting relevant data, knowledge and policy recommendations from technical cooperation projects and programmes;

(b) Building the analytical, statistical and reporting capacity on matters related to inclusive and sustainable industrial development, also in the context of the follow-up and review architecture of the Sustainable Development Goals, at the global, regional and national levels;

(c) Facilitating the policy dialogue on issues pertaining to the advancement of inclusive and sustainable industrial development, particularly, but not exclusively, in developing and middle-income countries;

(d) Strengthening the Organization's efforts to perform the sector-specific technical and analytical work required in the appraisal phase of large-scale country programmes, including the Programme for Country Partnership;

(e) Strengthening the institutional capacity of the member States of UNIDO for inclusive and sustainable industrial development, facilitating the integration of all services delivered by UNIDO across functions and thematic areas for the provision of long-term development results.

F. UNIDO partnership approaches

115. UNIDO continues to implement its Programme for Country Partnership as a high-impact solution to make inclusive and sustainable industrial development a reality, in Africa and beyond.

116. Progress continued to be made in the implementation of the Programme for Country Partnership in Ethiopia, Senegal and Peru, the first three pilot countries of the Programme. In 2017, UNIDO expanded the model to additional geographical regions to complete the piloting phase. New countries were announced at the seventeenth session of the General Conference, held in November: Cambodia for the Asia and the Pacific region and Kyrgyzstan for Europe and Central Asia. The last pilot country, for the Arab region, was Morocco, announced in early 2018.

117. Building on the lessons learned and the recommendations of an independent midterm evaluation conducted in 2017, UNIDO will gradually roll out the Programme for Country Partnership to more countries. The evaluation confirmed that, through the Programme, UNIDO can play a more prominent role in supporting industrial development in the countries involved in the Programme compared with previous approaches. The evaluation further emphasized the strong commitment and ownership of national governments in the Programme and highlighted the positive feedback from development partners.

IV. Conclusions and recommendations

118. Industrialization has lifted hundreds of millions of people out of poverty, providing them with jobs and income. The close link between inclusive and sustainable industrial development and long-term economic, social and environmental development remains undeniable.

119. Recent trends in industrial development present both opportunities and challenges for developing and emerging industrial economies. While growth in global manufacturing has improved significantly over the past years, and developing countries have raised their share in global industrial production, manufacturing output is not distributed evenly among nations. Premature deindustrialization is being observed in the least developed countries in Africa. In addition, far-reaching changes in established trade arrangements are likely to have a negative impact on global manufacturing. These trends require the utmost attention of policymakers and the international community.

120. At the same time, the new industrial revolution is likely to transform economies worldwide. Frontier technologies have the potential to improve the flexibility and efficiency of production processes, optimize decision-making, increase energy and resource efficiency and generally lead to more sustainable production and consumption patterns. However, employment and trade are the areas in which the most serious concerns are raised. Current trends in technological progress could further widen inequalities between and within countries, leaving the marginalized and vulnerable further behind.

121. As efforts are made to understand the opportunities and risks of the new industrial revolution, the real extent of its impact remains yet to be seen. It possesses both transformative and disruptive potential. Harnessing the opportunities offered by the new industrial revolution and minimizing its negative externalities will require concerted efforts by the international community through coordination, knowledge-sharing and targeted support.

122. In the absence of adequate normative and regulatory frameworks, the United Nations and its specialized agencies have a moral obligation to support Member States in this transition. Given the important role of the industrial sector in the development, application and dissemination of new technologies, UNIDO, as the central coordinator of industrial development in the United

Nations system, bears a special responsibility for supporting Member States in that regard.

123. **At the same time, the international development system has yet to fully transition to the 2030 Agenda for Sustainable Development and to ensure that the three dimensions of sustainable development are balanced. The reform of the United Nations development system provides an opportunity to enhance impartiality and independence at the field level and to ensure a more balanced approach to sustainable development in line with the 2030 Agenda and its Goals.**

124. **UNIDO should continue to build upon its long-standing knowledge and technical expertise in its mandated areas of work and its abilities to mobilize multi-stakeholder partnerships for inclusive and sustainable industrialization. The Organization will pursue the objective of integrating and scaling up its services as a pathway to narrowing many of the widening development gaps that characterize the current global development situation.**